

REMARKS/ARGUMENTS

Claims 1-15 and 18-33 are pending in this application. Previously, claims 16 and 17 were canceled, and claims 1-13, 32, and 33 were withdrawn. Claims 14, 15, and 18-31 are presently under examination and stand substantively rejected. In this Amendment, claim 14 is amended and new claims 34-37 are added. Reconsideration of the claims is respectfully requested.

Claim Amendments and New Claims

Support for the amendment to claim 14 can be found in the specification at, for example, paragraphs [0111] and [0114]-[0115]. New claims 34, 35, 36, and 37 correspond to currently pending claims 14, 18, 25, and 26. No new matter is introduced.

Objection to Drawings

Formal drawings are submitted herewith. Withdrawal of this objection is requested.

Rejection Under 35 U.S.C. §102

Claims 14, 15, 18-22, and 28-30 were rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent Publication No. 2003/0008411 to Van Dam et al. ["Van Dam"]. This rejection is traversed.

According to MPEP 2131, in order to anticipate a claim, a cited reference must teach all elements of the claim. Van Dam does not meet this test.

Amended independent claim 14 is drawn to a method of conducting a binding assay. The method includes, among other things, forming a plurality of looped flow channels. Each looped sample flow channel comprises a closed loop, and that sample solution is recirculated within the closed loop. This feature is not shown in Van Dam. In contrast, Van Dam describes forming a snake like channel through which flow is directed. For example, paragraph [0190] provides the following:

"Alternatively, more complicated reaction sequences can be achieved by having a plurality of valves at the waste side which is designed to redirect the flow from selected channels back into other channels flowing in the reverse direction. In

this manner, one can achieve a 'serpentine' arrangement of flow channels similar to that described in Example 1."

Relatedly, Example 1 of Van Dam discusses various mold patterns for making elastomer layers (Figs. 8-11), and each of these patterns also presents a snake like channel. Applicants submit that the serpentine patterns described in Van Dam are different from the presently claimed closed loop configuration. The closed loops allow for continuous recirculation within the loop system. The linear, albeit serpentine, configuration of Van Dam allows for a single-pass of flow.

Hence, Van Dam fail to teach or suggest forming a looped flow channel having a closed loop. What is more, Applicants submit that Van Dam does not teach or suggest an architecture that could be configured to form a looped channel having a closed loop as presently claimed.

Advantageously, as noted in the instant disclosure at, for example, paragraph [0111], recirculation allows for prolonged contact between a sample solution and a solid substrate-bound ligand. This feature can be particularly useful when the sample solution contains a low concentration of anti-ligand. As the sample solution is recirculated through the closed loop, there is increasing opportunity for a greater amount of anti-ligand to become bound with the ligand. Hence, the presently claimed closed loop formation offers a substantial benefit over single-pass systems.

Because Van Dam has not been shown to teach or suggest recirculating a sample solution within a closed loop as recited in amended claim 14, Van Dam does not anticipate the claim. Claims 15, 18-22, and 28-30 depend from amended claim 14, and are therefore allowable for depending from an allowable base claim as well as for the novel combination of elements they recite. Withdrawal of this rejection is respectfully requested.

First Rejection Under 35 U.S.C. §103

Claims 23-26 and 31 were rejected under 35 U.S.C. §103(a) as allegedly obvious in view of Van Dam. This rejection is traversed.

According to MPEP 2143, a *prima facie* case of obviousness requires, among other things, that when a single reference is cited the cited reference, or any obvious modification thereof, must teach or suggest all the claim elements. Van Dam does not meet this test.

As noted above, Van Dam does not teach or suggest recirculating a sample solution within a closed loop as recited in amended base claim 14. The proposed modifications to Van Dam set forth in the Office Action do not remedy this deficiency. Hence, presently pending claims 23-26 and 31, which depend from amended claim 14, are allowable as depending from an allowable base claim, as well as for the nonobvious combination of elements they recite. Withdrawal of this rejection is respectfully requested.

Second Rejection Under 35 U.S.C. §103

Claim 27 was rejected under 35 U.S.C. §103(a) as allegedly obvious over Van Dam in view of U.S. Patent Publication No. 2002/0102577 to Raillard et al. ["Raillard"]. This rejection is traversed.

According to MPEP 2143, a *prima facie* case of obviousness requires, among other things, that when two references are cited, the combination must teach or suggest all the claim elements. The combination of Van Dam and Raillard does not meet this test.

As noted above, Van Dam does not teach or suggest recirculating a sample solution within a closed loop as recited in amended base claim 14. Raillard does not remedy this deficiency. Hence, presently pending claim 27, which depend from amended claim 14, is allowable as depending from an allowable base claim, as well as for the nonobvious combination of elements it recites. Withdrawal of this rejection is respectfully requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

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PATENT

Respectfully submitted,

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Attachments:

Formal Drawings

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